

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A light emitting diode device, comprising:

a substrate deposited on a bottom of the light emitting diode device;

a semiconductor layer formed above the substrate ~~[[and]]~~ including an n-type semiconductor layer, an active layer and a p-type semiconductor ~~layers~~ layer, wherein the active layer is formed between the n-type semiconductor layer and the p-type semiconductor layer; and

a patterned transparent conductive layer is formed on the p-type semiconductor ~~layers~~ layer and filled with a light-transmission conductive ~~layers~~ layer so as to effectively increase transmission ~~effectively~~ of the light emitting diode device [[.]];

wherein the patterned transparent conductive layer is made of at least one metal selected from a group consisting of Ni, Au, Cr, Ir, Pt, Ag, Ru and Be.

2. (Original) The light emitting diode device of claim 1, wherein the substrate is a sapphire substrate.

3. (Original) The light emitting diode device of claim 1, wherein the n-type semiconductor is an N-GaN layer.

4. (Original) The light emitting diode device of claim 1, wherein the p-type semiconductor layer is a P-GaN layer.

5. (Currently Amended) The light emitting diode device of ~~claims~~ claim 1, wherein the active layer is an InGaN/GaN multiple quantum well structure.

6. (Currently Amended) The light emitting diode device of ~~claims~~ claim 1, wherein the light-transmission conductive layer is a metal-oxide layer.

7. (Canceled)

8. (Currently Amended) The light emitting diode device of ~~claims~~ claim 1, wherein the light-transmission conductive layer with high transparency is an oxide layer selected from ~~the~~ a group consisting of indium tin oxide (ITO), indium oxide, tin oxide, indium lead oxide, lead oxide, antimony tin oxide, antimony oxide, antimony zinc oxide, cadmium tin oxide, cadmium oxide, zinc oxide, and magnesium oxide.

9. (Currently Amended) A light emitting diode manufacturing method, comprising the steps of:

forming a substrate on a bottom of the light emitting diode device;

forming a semiconductor layer above the substrate
[[and]] including an n-type semiconductor layer, an active layer and a p-type semiconductor ~~layers~~ layer, wherein the active layer is formed between the n-type semiconductor layer and p-type semiconductor layer;

forming a patterned transparent conductive layer formed on the p-type semiconductor ~~layers~~ layer; and

forming a light-transmission conductive layer ~~formed overlay~~ overlying the patterned transparent conductive layer; wherein an occupied area of the patterned transparent conductive layer ~~following~~ follows a formula

$$a < (1 - T_T / T_I) A$$

where a is the patterned transparent conductive layer occupied area,

A is the area of the light emitting diode,

T_T is the transparency of the patterned transparent conductive layer, and

T_I is the transparency of the light-transmission conductive layer.

10. (Currently Amended) A light emitting diode device, comprising:

a substrate deposited on a bottom of the light emitting diode device;

a semiconductor layer formed above the substrate and including an n-type semiconductor layer, an active layer and a p-type semiconductor ~~layers~~ layer, wherein the active layer is formed between the n-type semiconductor layer and the p-type semiconductor layer;

a patterned reflection layer formed on the p-type semiconductor ~~layers~~ layer;

a patterned transparent conductive layer formed on the patterned reflection layer; and

a light-transmission conductive layer ~~formed overlay~~ overlying a hybrid of the patterned transparent conductive layer and the patterned reflection layer; wherein the patterned reflection layer reflects light absorbed by the patterned transparent conductive layer so as to increase illumination of the light emitting diode device.